

# **QUARTERLY SITE INSPECTION REPORT**

## **BAILEY SUPERFUND SITE ORANGE COUNTY, TEXAS**

MAY 29, 1998

PREPARED BY: CECOS INTERNATIONAL, INC.



125168

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## **SECTION 1**

### **1.0 INTRODUCTION**

Todd Broussard of Cecos International, Inc. and Mark Murphy of Parsons ES conducted the third quarterly inspection of the Bailey Site on May 29, 1998. The inspection was conducted in accordance with the Final Inspection, Maintenance, and Monitoring Plan (prepared by Parsons ES and GeoSyntec, September 1997). The following BSSC technical committee members were present for the inspection: Chuck Orwig, Lou Levi, and Fred Manhart. Chris Villarreal (U.S.E.P.A.) was also present during the inspection.

An inspection checklist was developed to aide in the inspection and is included in Appendix A. The check list was completed as the entire site was walked and observations were made. Any areas of concern that were observed during the inspection were noted and located on a site map which is included in Appendix B. Photographs were taken during the inspection and are presented in Appendix C. A summary of the inspection is presented in Section 2.

## **Section 2**

### **2.0 Inspection Summary**

Todd Broussard of Cecos, Mark Murphy of Parsons ES, Members of the Bailey Site Settlers Committee (BSSC), and Chris Villarreal (USEPA) conducted a visual inspection of the site on May 29, 1998.

### **2.1 Grounds Inspection**

The North and East Dike areas were inspected by traversing the surface area of each dike and thoroughly looking for signs of problems that would affect the integrity of the geosynthetic lightweight cap system. The vegetative cover was generally found to be in a distressed condition due to lack of any significant rainfall in the last several weeks at the site. The last significant rainfall event observed at the site since this inspection occurred was during the week of April 13<sup>th</sup>. The areas of the geosynthetic lightweight cap were inspected for signs of erosion. No signs of significant erosion were observed. Repaired areas of erosion channeling appear to be holding up well.

The North and East Dike areas were carefully observed for signs of differential settlement. There were no significant signs of differential settlement. The rip-rap area located outside of the geosynthetic composite cap limits on the western end of the North Dike, adjacent to the Pond A bank, which has been identified in the previous inspections as a possible area of differential settlement, remains unchanged. After close observation of the area, there were no apparent signs of any movement or change since the last inspection.

There were no signs of water ponding on the North or East Dike geosynthetic composite cap limits. The ponding areas noted during the February 1998 Quarterly inspection had been filled and graded with topsoil to promote positive drainage. These areas have been fertilized and seeded, but due to the dry conditions the grass has not fully developed.

The gas vents located on the North and East Dikes were inspected and all were found to be in good condition.

## **2.2 Dike Breaches and Drainage Pipes Inspection**

The two breaches in the North Marsh perimeter dike were inspected and found to be in good condition and allowing free tidal flow. A moderate incoming tide occurred during the inspection period. The drainage pipes in the former laydown area and at the eastern end of the East Dike were found to be in good condition with no obstructions present.

## **2.3 Fence and Sign Inspection**

The length of the fence was walked and observed to be in good condition. The gates and locks were inspected and found to be in good working order. The signs around the perimeter of the site were properly posted and visible. The noted missing sign during the February inspection was replaced during the quarter, which is located on the East Dike adjacent to the drainage channel.

## **2.4 Site Access Bridge Inspection**

The access bridge to the site was observed to be in good condition. The bridge decking, handrails, approaches, and steel structure were visually inspected.

## **2.5 Road Inspection**

The access roads on the North and East Dikes were inspected for signs of rutting, potholes, erosion, and accumulation of silt. The roads were found to be in good condition.

## **2.6 Other Observations**

The last quarterly inspection conducted on February 27, 1998 noted some areas of concern and recommended action to correct these problems. American Remediation Options performed the following work activities during the week of April 13, 1998 to address these concerns:

- A representative soil sample was collected and sent to Texas A&M for a recommendation on the type and rate of fertilizer for the areas of the site where the grass has not fully developed. A copy of this report is attached. We are waiting on the drought conditions to end prior to reseeding and fertilizing these areas.
- The areas of the North and East Dike where ponding water was observed has been filled and graded with topsoil to provide positive drainage. These areas have been fertilized and seeded, but the vegetative growth has been limited due to the dry conditions.
- The sign missing from the East Dike fence along the drainage channel has been replaced.



- Modifications to the security fence have been made in the former laydown yard. Post and barbed wire were added at the drainage ditch locations to prevent access to the site by allowing someone to crawl underneath the fence at these locations.
- Old silt fence construction debris near the East Dike entrance was picked up and properly disposed of off-site.

Desiccation cracking of the topsoil was observed on both the North and East Dike areas. The desiccation cracks were observed to be mainly concentrated on the south end of the East Dike and near the center of the North Dike Area. A map is provided in Appendix B that details where desiccation cracking was observed. The largest cracks observed were approximately 2" wide, approximately 10" deep, and and greater than 10 feet in length. It appeared that some of the cracks may extend nearly down to the geosynthetic composite liner surface, however no liner was visible through any of the cracks.

Haybales at the west end of the North Dike remain in operable condition and are providing run-off erosion protection during re-establishment of the vegetation. The vegetation at this repair remains dormant due to the lack of rainfall.

## **Section 3**

### **3.0 Summary of Problem Areas and Recommended Actions**

Areas of concern observed during the May 1998 Quarterly Site Inspection included the distressed condition of the vegetative cover and desiccation cracking of the topsoil on the East and North Dike. The drought conditions of the site have caused these problems.

Table 3.1 on the following page describes the areas of concerns observed during the site inspection and provides a recommendation for corrective action.

### **TABLE 3.1**

#### **Observations and Recommendations**

##### **Observation No.1**

The lack of rainfall at the site has caused desiccation cracking of the topsoil and the vegetation to be distressed.

##### **Recommendation No. 1**

Rain gauges are to be placed on the site and monitored. If no significant rainfall is observed at the site within a week of the inspection, a recommendation will be made to begin importing water to the site and begin watering of the vegetative cover to prevent losing the vegetation already established to date. The site will be inspected to locate the most distressed areas of vegetation and desiccation cracking. The watering operations will concentrate on those areas first prior to watering the remainder of the site. Water trucks will not be allowed off the access roads and will spray water from the roads onto the vegetation. The desiccation cracks will be closely monitored. Any cracks greater than two inches in width and threaten to expose the geosynthetic composite liner will be filled in with loose topsoil from the soil stockpile area.

##### **Observation No.2**

There are still areas as noted from the February 1998 Quarterly Inspection that need to be reseeded and fertilized.

##### **Recommendation No.2**

Perform this work as site conditions warrant. The recommendations from the Texas A&M Agricultural Extension Office for fertilizer type and application rate should be followed. Re-seeding and fertilizing should be performed when the moisture conditions on the topsoil will sustain new growth.

**Observation No.3**

Possible differential settlement was observed in a small area of the rip-rap slope located outside of the geosynthetic lightweight cap limits on the North Dike. No signs of differential settlement were observed on the adjacent cap areas. This location was noted on the map included in Appendix B.

**Recommendation No.3**

Continue visual monitoring of this area.

## **APPENDIX A**

### **QUARTERLY SITE INSPECTION CHECKLIST**

# BAILEY SITE INSPECTION CHECK LIST

Inspection Date:

May 29, 1998

Inspection Time:

10:00 AM

Name of Inspector:

Todd Broussard / Mark Murphy

Weather Conditions:

Partly Cloudy - Low 90s

## Ground Inspections

Condition of Vegetation:

Grass Height

2 to 3"

Color

Brown to Green

Fullness

Isolated thin areas

Areas of Concern:

☒ Yes ☐ No

(If Yes Detail on Map)

Signs of Erosion:

Yes

☐ Yes ☒ No

(If yes detail location on map and note average depth and width)

Exposed Geosynthetics:

Yes

☐ Yes ☒ No

(If yes provide location on map and note if its the geocomposite drainage layer, 60 mil HDPE liner, or geosynthetic clay liner)

Signs of Differential Settlement:

Yes

☐ Yes ☒ No

(If yes, provide location on map noting estimated depth and width)

Ponding Greater than 2" in Depth:

Yes

☐ Yes ☒ No

(If yes, provide location on map noting depth)

Evidence of Prolonged Ponding

Yes

☐ Yes ☒ No

Estimated date of last rain event:

May 1, 1998

Gas Vents:

Condition of Barrier:

Good

Condition of Piping:

Good

Screens Intact:

☒ Yes ☐ No

(If no to any, provide details on map)

Riser Pipe Plumb:

☒ Yes ☐ No

☐ Yes ☐ No

# BAILEY SITE INSPECTION CHECK LIST

## Condition of Dike Breaches and Drainage Pipes

Verify that each allows free drainage:

Pond A culvert at South end of East Dike:	<input checked="" type="radio"/> Yes	No
Site Entrance Area (Non-capped Area):	<input checked="" type="radio"/> Yes	No
Perimeter Dike Breach in Pond A:	<input checked="" type="radio"/> Yes	No
Perimeter Dike Breach in North Dike:	<input checked="" type="radio"/> Yes	No

If the answer was No to any of the above, describe the obstruction:

N/A

## Fence and Sign Inspection

### Chain Link Fencing

Signs of unauthorized entry:	Yes	<input checked="" type="radio"/> No
Fence Damage:	Yes	<input checked="" type="radio"/> No
Corrosion:	Yes	<input checked="" type="radio"/> No
Barb Wire Damage:	Yes	<input checked="" type="radio"/> No

Gates & Locks in good condition:	<input checked="" type="radio"/> Yes	No
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### Overhang Extensions

Signs of unauthorized entry:	Yes	<input checked="" type="radio"/> No
Signs of damage:	Yes	<input checked="" type="radio"/> No

### Signs

Verified all signs:	<input checked="" type="radio"/> Yes	No
Signs on all gates:	<input checked="" type="radio"/> Yes	No

Provide location of any damage on the map. Describe below any damage to the fence or signs:

N/A

## BAILEY SITE INSPECTION CHECK LIST

### Site Access Bridge

Are the following in good condition:

Wood Decking	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Hand Rails	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Approaches	<input checked="" type="radio"/> Yes	<input type="radio"/> No
Bridge Steel Structure	<input checked="" type="radio"/> Yes	<input type="radio"/> No

If no, describe the observed condition:

N/A

### Road Inspection

Rutting	Yes	<input checked="" type="radio"/> No	(If yes to any, provide location on map)
Potholes	Yes	<input checked="" type="radio"/> No	
Erosion Channeling	Yes	<input checked="" type="radio"/> No	
Accumulation of Silt	Yes	<input checked="" type="radio"/> No	

### Other General Site Observations:

- Vegetative Cover is in poor condition due to lack of rainfall.
- Topsoil layer is cracking on the north side of the North Dike and the middle and southern areas of the East Dike. This is due to lack of rainfall and clay content in the topsoil layer. Some cracks are ten inches in depth, one inch in width and ten feet in length. Areas will be monitored next week.
- Areas of ponding water were observed on the inspection of February 27, 1998. During the past quarter, these areas were filled to grade, seeded, and fertilized. Seed remains dormant due to lack of rainfall.



## BAILEY SITE INSPECTION CHECK LIST

### Summary of Problem Areas Identified

- The most obvious problem area observed during the inspection is the poor condition of the vegetative cover. The site has not received rainfall in 30 days. An agreement was made between the inspectors to observe site cover again on Wednesday, June 3, 1998. If rainfall has not occurred by this date, the inspector will recommend to the Bailey Committee to spray the site using a water truck. The water truck will only travel on the site roads.

Note: All recommended actions listed during the February 27, 1998 inspection were observed as completed.

*Odell Broussard*

Inspector's Signature

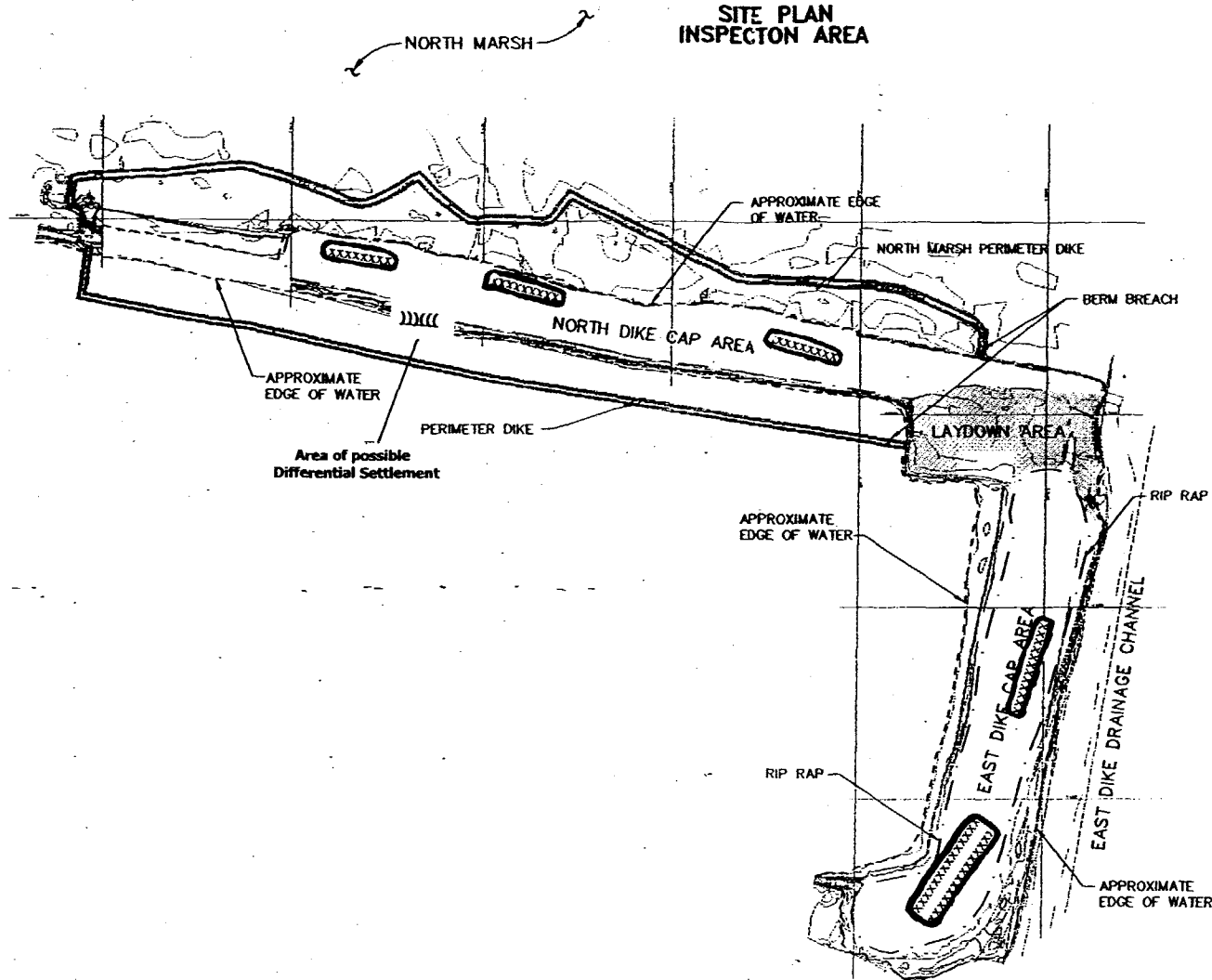
*5/29/98*

Date

## **APPENDIX B**

### **SITE MAPS**

# **SITE PLAN INSPECTION AREA**




## **NOTES:**

1. DRAWING BASED ON PREVIOUS SITE TOPOGRAPHIC INFORMATION AND DESIGN DRAWINGS. DRAWING IS NOT BASED ON FINAL AS-BUILT DATA.
2. LOCATION OF EDGE OF WATER SHOWN IS THE LOCATION AT THE TIME OF SURVEY. WATER LEVELS SUBJECT TO TIDAL VARIATIONS. AVERAGE TIDE ELEVATIONS ARE: LOW TIDE - -2.0 FEET (MSL) AND HIGH TIDE +1.0 FEET (MSL). TIDE ELEVATIONS ARE SUBJECT TO VARIATION DEPENDING ON SEASON AND LOCAL WEATHER CONDITIONS.
3. RIPRAP LOCATED ON ALL SLOPES.
4. INSPECTION AREA TO INCLUDE, AS A MINIMUM,
  - NORTH DIKE CAP AREA
  - EAST DIKE CAP AREA
  - ALL AREAS OF RIP RAP
  - VISUAL OBSERVATION OF PERIMETER DIKES
  - ACCESS BRIDGE
  - SITE FENCING (FIGURE 2.2)

## **LEGEND - GENERAL**

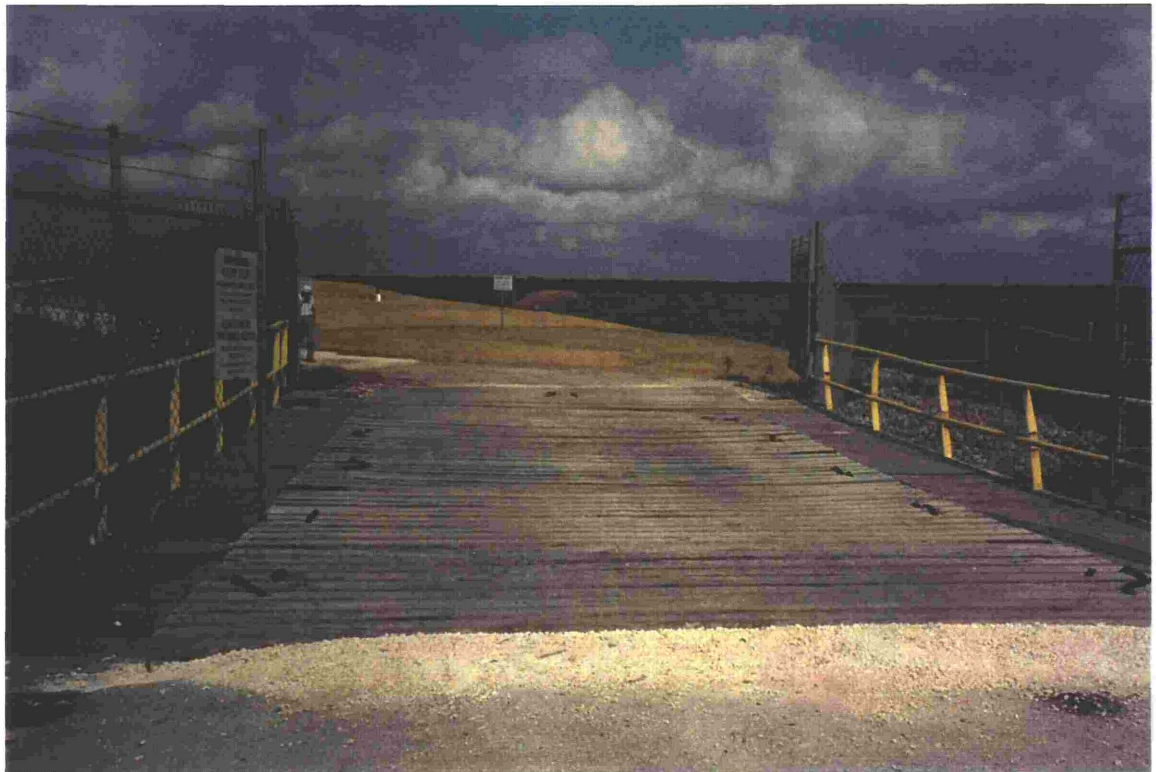
- EXISTING CONTOUR (FEET)
- - - ANCHOR TRENCH
- APPROXIMATE LIMIT OF GRAVEL SURFACING
- ▨ Areas of topsoil cracking
- ||||| Area of possible Differential Settlement

0 300  
SCALE IN FEET

 <b>GeoSYNTEC CONSULTANTS</b> ATLANTA, GA	
PROJECT NO. GE3913-620	FIGURE NO. 2.1
DOCUMENT NO.	FILE NO. 3913F004

## **APPENDIX C**

### **PHOTOGRAPHS**



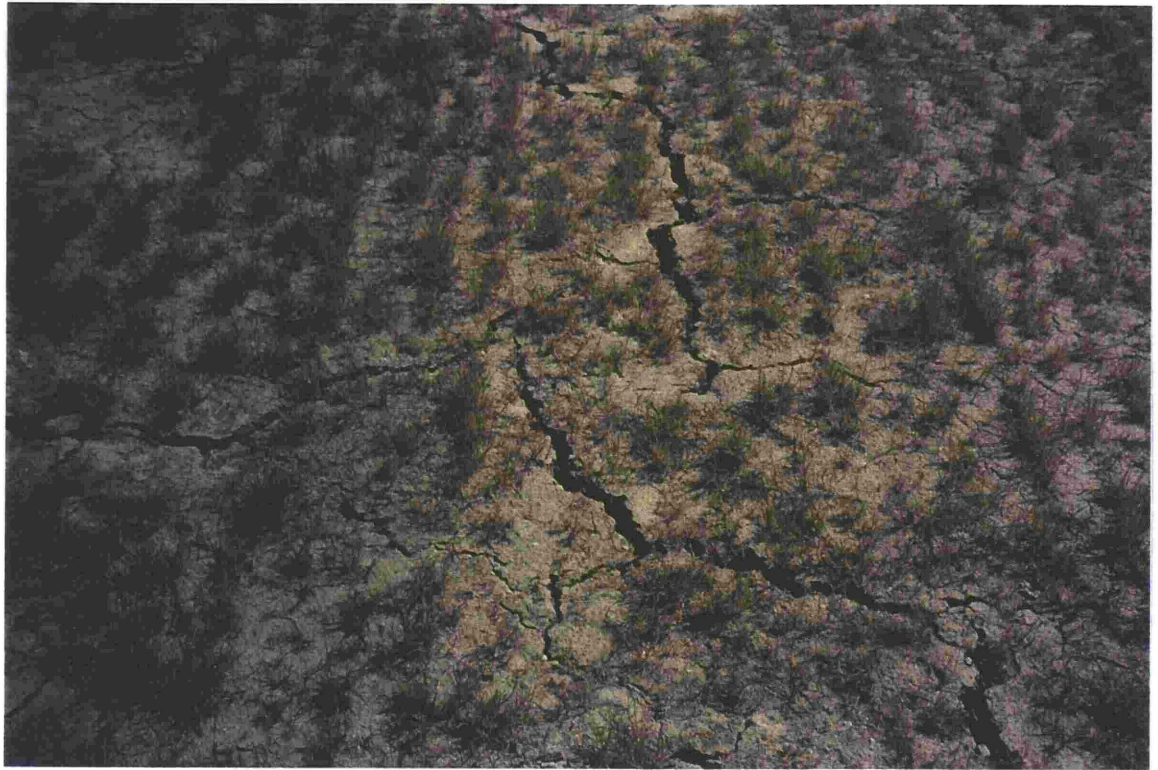
Bridge at Front Entrance  
Good Condition  
All signs, locks, and handrails are in good condition  
10:00 a.m. on May 29, 1998



Cracking of the topsoil layer-  
North side of North Dike  
10:15 a.m. on May 29, 1998







Cracking of the topsoil layer- (Up to 12 inches in depth)  
South side of East Dike  
10:55 a.m. on May 29, 1998







Area of possible subsidence (rip-rap material)  
 South side of North Dike  
 10:30 a.m. on May 29, 1998



Rip-rap material in good condition  
 South side of North Dike  
 10:35 a.m. on May 29, 1998





East Fence of Laydown Yard  
Security measures taken to elude trespassing  
11:05 a.m. on May 29, 1998



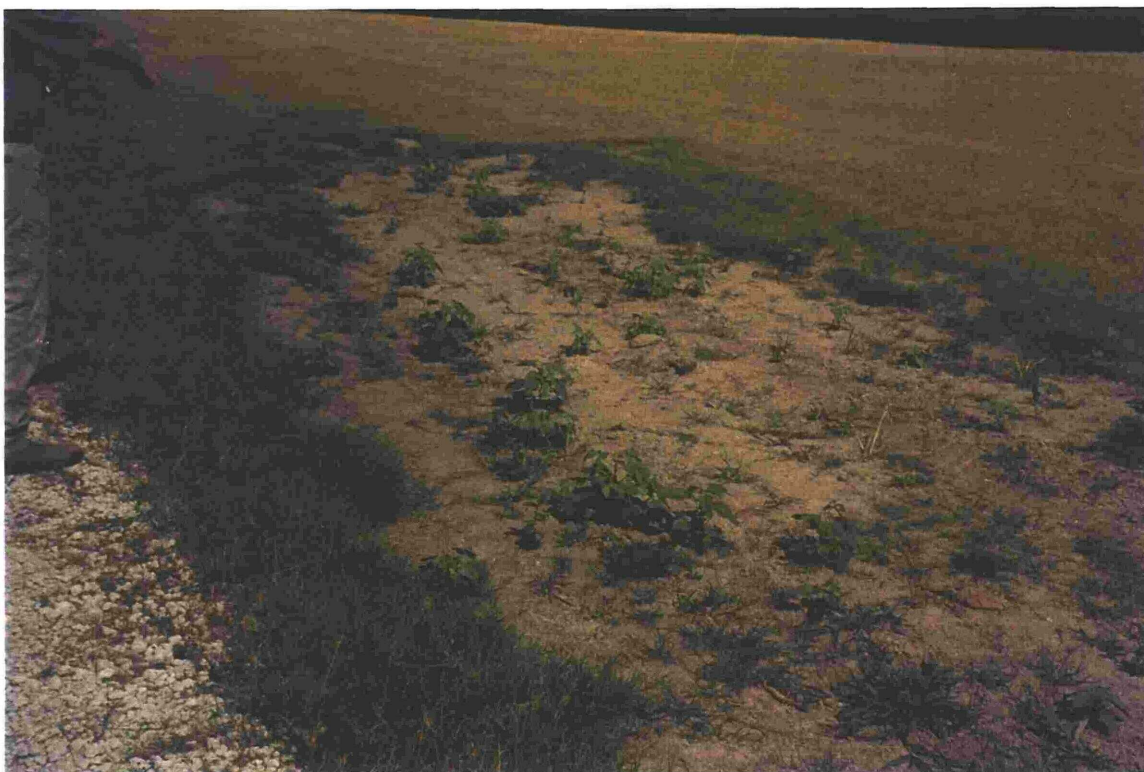


Condition of Vegetative Cover (stressed)  
East Dike looking southward  
10:50 a.m. on May 29, 1998



Condition of Vegetative Cover (stressed)  
North Dike looking eastward  
10:10 a.m. on May 29, 1998





Areas of general fill placement due to findings of the February 29, 1998 Inspection. Areas were filled with topsoil, fertilized, and seeded by American Remediation Company.  
10:45 a.m. on May 29, 1998







Areas of general fill placement due to findings of the February 29, 1998 Inspection. Areas were filled with topsoil, fertilized, and seeded by American Remediation Company.  
10:45 a.m. on May 29, 1998







Tidal Flow (Northeast corner, Pond A, adjacent to Laydown Yard)  
Free of obstructions  
10:38 a.m. on May 29, 1998



Tidal Flow (North side of North Dike)  
Free of obstructions  
10:20 a.m. on May 29, 1998

## PROFESSIONAL ENGINEER CERTIFICATION

I , William E. Schlafer, a registered professional engineer in the State of Texas (Registration No. 66124), certify that the quarterly site inspection report dated May 29, 1998 for the Bailey Superfund Site, Orange County, Texas was prepared to satisfy the Consent Decree requirements for this site. The information contained in the report is accurate to the best of my knowledge.

William E. Schlafer  
William E. Schlafer, P.E.

6/29/98  
Date

